



AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0047] with the following paragraph.

[0047] Moreover, force measurement devices 22, such as ~~stain~~strain gauges or piezoelectric elements, may be applied to the load enhancement device as shown in FIG. 5 to measure the compensation force. Such an option may prove useful in monitoring applications. For applications of active magnetic bearing systems, the force (dynamic and static) delivered by the active bearing is inherently available. Using a force measurement device as illustrated in FIG. 5, the force compensated by the load enhancement device of the present invention is therefore measured. As a result, the total external force applied to a shaft can be obtained.

Please replace paragraph [0050] with the following paragraph.

[0050] The force delivered by the load enhancement device and method of the present invention may be measured by either a ~~stain~~strain-gauge or by a piezoelectric element (FIG. 5), for example.

Please replace paragraph [0051] with the following paragraph.

[0051] As a way of example, the method according to an embodiment of the third aspect of the present invention comprises using soft magnetic materials to build the rotor and the stator, thereby optimizing usage of magnets generating a compensation force (see FIGS. 1 to 4 for example); using a spacer for adjustment of the compensation force; using a piezoelectric actuator to automatically adjust the compensation force (be it a static and/or dynamic force); using a ~~stain~~strain gauge or a piezoelectric element to measure the compensation force; placing the load enhancement device at an end of a shaft, thereby not requiring modification of the shaft length.

Please replace paragraph [0059] with the following paragraph.

[0059] People in the art will appreciate that the present invention does not introduce any friction loss due to a direct contact using rolling element thrust bearings for example, or fluid coupling such as fluid type thrust bearings. Moreover, since significantly larger gaps between

the rotor and the stator may be used in comparison to the case of thrust bearings systems, the present invention allows minimizing windingwindage losses.